

## Dr. Daniel M. Ginosar

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Specializing in fuel catalysis and supercritical fluids research

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Education: Dr. Daniel M. Ginosar received his B.S. in chemical engineering in 1981

from U.C. Davis and his Ph.D. in chemical engineering in 1994 from the

University of Kansas.

**Work experience:** He is an advisory scientist in the Chemistry Department at the Idaho National Engineering and Environmental Laboratory. Dr. Ginosar has been employed at the INEEL since 1993; he is currently the technical and group leader of the Supercritical Fluids Group in the Chemistry Department. Prior to his graduate work, Dr. Ginosar was employed as an engineer at the UNOCAL San Francisco Refinery from 1981 through 1987.

**Professional endeavors:** Dr. Ginosar's research interests include heterogeneous catalysis in supercritical fluids, solid acid catalysis, and supercritical fluid synthesis of nano- and micron-scale materials, and has been awarded nearly \$4,000,000 in research grants with work in the areas of catalytic upgrading of gasoline stocks, chemical production, thermochemical water splitting, waste to fuels, environmental remediation and the production of nano materials from supercritical fluids.

Dr. Ginosar is currently the principal investigator for two DOE-FE funded research projects: "Development of a Solid Catalyst Alkylation Process Using Supercritical Fluid Regeneration" and "Proton Exchange" Reactive Membranes for Conversion of Light Alkanes to Clean Liquid Fuel," and two internally funded laboratory research projects, "Supercritical Fluid Catalyst Regeneration Chemistry" and "Hydrogen Production from High Temperature Nuclear Reactors." Dr. Ginosar has authored multiple peer-reviewed publications, patents and national presentations in these areas.

## Patents:

- U.S. Patent No. 6,652,654 -- System Configured for Applying a Multiple Modifying Agent to a Substrate
- U.S. Patent No. 6,623,686 B1 -- System Configured for Applying a Modifying Agent to a Non-Equidimension Substrate
- U.S. Patent No. 6,579,821 B1 -- Method for Reactivating Solid Catalysts Used in Alkylation Reactions
- U.S. Patent No. 6,511,601 B2 -- Method and System for Extraction of Chemicals from Groundwater Remediation Effluent Water
- U.S. Patent No. 6,495,204 B1 -- Method for Modifying Monofilaments, Bundles of Monofilaments, and Fibrous Structural Materials

## **Licensing information**

For information on licensing INEEL technologies such as those developed by Dr. Ginosar, contact Technology Outreach Account Executive:

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- U.S. Patent No. 6,402,952 -- Apparatus and Method for Extraction of Chemicals from Aquifer Remediation Effluent Water
- U.S. Patent No. 6,103,948 -- Solid catalyzed isoparaffin alkylation at supercritical fluid and near-supercritical fluid conditions
- U.S. Patent No. 6,086,837 -- Method of Synthesizing Enriched Decaborane for use in Generating Boron Neutron Capture Therapy Pharmaceuticals